

Dependability Quality



TECHINCO

CORROSION & NDT MANAGEMENT

Technical Inspection &
Corrosion Control Company
Since 1994

ISO 9001:2008, ISO 14001:2004, OHSAS 18001:2007, IMS

Other Asset Integrity Management Tools

- Risk-Based Inspection (RBI)
- Reliability Centered Maintenance (RCM)
- Hazard and Operability Study (HAZOP Study) and Safety Integrity Level (SIL Study)
- Fitness For Service (FFS)
- Failure Mode, Effect and Criticality Analysis (FMECA)
- Fault Tree Analysis (FTA)
- Material and Coating Selection
- Corrosion Monitoring and Controlling System
- Cathodic Protection



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Certified By:



Membership of:



Floormap VS2i & Handscan



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WHEN YOU NEED

FLOOR SCANNING

Address: No. 18, Kooh-e-Noor St., Motahari Ave., Tehran, Iran

Floormap VS2i

Handscan



The **FloormapVS2i** is a new generation of Magnetic Flux Leakage (MFL) system for the inspection of bulk liquid storage tank floors. An on-board touch screen computer allows full data acquisition of signals detected by MFL. Viewing of defect indications can be carried out on the on-board computer in the dedicated data acquisition software. The reporting software allows the grouping of defects according to severity in operator definable color coded bands. As the scanner passes over a corrosion pit the excess magnetic field is forced out of the plate and is detected by 36 Hall Effect sensors mounted in the center of the magnet.

The **Floormap VS2i** has been designed to detect under floor conical pit or lake type corrosion represented by an artificial reference hole 40% deep. Under ideal conditions pitting of approximately 20% loss in a 6.0 mm plate can be detected and sized. Floor thicknesses over 12 mm and up to 20 mm can be inspected by switching to manual mode.

Technical and Performance Specifications

Principle of Operation	Magnetic Flux Leakage
Detection	32 off Hall Effect sensors
Scan Width	250mm
Maximum Single Scan Length	15 meters
Speed	0.5m/ sec
Thickness Range - Maximum	12.5mm (automated sizing mode) Maximum 20mm (detection mode only)
Test through Coatings	Yes if non magnetic
Maximum Coating Thickness	6mm
Sensitivity	Adjustable
Max Sensitivity	20% under floor corrosion
Real Time Analysis	Yes



Overall view of the tank floor showing defects



Plate view showing defects



Conformity test report with tank floor condition

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The **Handscan** is a Magnetic Flux Leakage (MFL) device for detecting corrosion pitting in flat plate and curved plate. The **Handscan** can be used to detect corrosion pitting in ferrous material with wall thicknesses from 6 mm to 15 mm.

The **Handscan** head can also be used to inspect curved plates such as tank shells. The minimum radius the **Handscan** is capable of operating on (Circumferentially) is:

Internally - 1.5 M radius (3.0 M diameter)

Externally - 2.5 M radius (5.0 M diameter)

Signals from corrosion, above the operator controllable threshold, are displayed as both a visual and audible alarm. It's low profile and extendable handle allow scanning in otherwise inaccessible areas of storage tanks such as the shell to annular area and under pipe work or heater coils.



Technical and Performance Specifications

Principle of Operation	Magnetic Flux Leakage
Detection	18 off Hall Effect sensors
Scan Width	150 mm
Method of Propulsion	Hand Push / Pull
Speed	0.5m/ sec
Handle	Extendable handle supplied
Profile	Clearance under pipe work required 120 mm
Thickness Range	Maximum 15 mm
Test Through Coatings	Yes if non magnetic
Maximum Coating Thickness	6mm
Sensitivity	Adjustable
Max Sensitivity	10% under floor on un-coated 6 mm plate 20% under floor on coated 6 mm plate